

ABSTRACT

Catalyst and solid component of catalyst for the (co)polymerization of ethylene, comprising titanium, magnesium, chlorine, a protic organo-oxygenated compound  $D_p$  and a neutral aprotic electron-donor compound  $D$ , in the following molar ranges:  $Mg/Ti=1.0-50$ ;  $D/Ti=1.0-15$ ;  $Cl/Ti=6.0-100$ ;  $D_p/D=0.05-3$ ; and a process for obtaining said component comprising the following steps in succession: (a) formation of a mixture and dissolution, in said electron-donor aprotic compound  $D$ , of a magnesium chloride and a titanium compound having formula (II):  $Ti^*(OR_3)_aX_{(v-a)}$  wherein each  $R_3$  independently represents a hydrocarbyl or acyl radical having from 1 to 15 carbon atoms; each  $X$  is selected from chlorine, bromine or iodine; " $v$ " has the value of 3 or 4, and " $a$ " is a number varying from 0 to " $v$ ", with a molar ratio between titanium and magnesium ranging from 1/1 to 50/1; (b) partial separation of the compound  $D$  from said mixture prepared in step (a) until a residue is obtained, solid at room temperature, wherein the  $D/Ti$  ratio ranges from 1.5 to 40; (c) formation of a suspension of said solid organo-oxygenated protic compound  $D_p$ , in such a quantity that the molar ratio  $D_p/D$  ranges from 0.1 to 1.2 and maintaining the mixture until equilibrium is reached, to form the desired solid component of catalyst.